

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): HUH, Hoon et al.

Examiner: MOORE, Ian N.

Serial No.: 09/888,915

Group Art Unit: 2616

Filed: June 25, 2001

Docket: 678-682 (P9821)

For: **METHOD AND APPARATUS FOR  
TRANSMITTING DATA RATE CONTROL  
INFORMATION IN MOBILE  
TELECOMMUNICATION SYSTEM FOR  
PACKET DATA TRANSMISSION**

Dated: August 6, 2007

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
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Respectfully submitted,

Paul J. Farrell

Reg. No.: 33,494

Attorney for Applicant(s)

**THE FARRELL LAW FIRM**  
333 Earle Ovington Blvd., Suite 701  
Uniondale, New York 11553  
516-228-3565

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Dated: August 6, 2007

  
Michael J. Musella



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

**APPLICANT(S):** HUH, Hoon et al. **GROUP ART UNIT:** 2616  
**APPLICATION NO.:** 09/888,915 **EXAMINER:** MOORE, Ian N.  
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**APPELLANTS' BRIEF ON APPEAL**

**REAL PARTY IN INTEREST**

The real party in interest is Samsung Electronics Co, Ltd, the assignee of the subject application, having an office at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea.

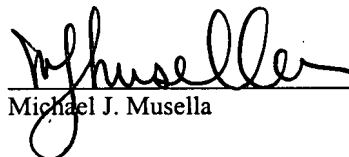
**RELATED APPEALS AND INTERFERENCES**

To the best of Appellant's knowledge and belief, there are no currently pending related appeals, interferences or judicial proceedings.

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Dated: August 6, 2007

  
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### STATUS OF CLAIMS

Original Claims 1-42 were filed on June 25, 2001. Claims 1-6, 8-13, 15, 20-27, 30-35, 37 and 38 were amended in an Amendment filed December 23, 2005. Claims 11, 22, 25, 30, 33 and 37 were amended and Claims 40-42 were cancelled in an Amendment filed May 22, 2006. Claims 1, 4, 8, 11 and 15 were amended in an Amendment filed December 28, 2006. Thus, Claims 1-39, are pending in the Appeal. Claims 22-29 have been marked by the Examiner as being allowed. Claims 1, 4, 8, 11, 15, 22, 25, 30, 33 and 37 are in independent form. For the purposes of this Appeal, Claims 1-21 stand or fall together, and Claims 30-39 stand or fall together.

### STATUS OF AMENDMENTS

Thus, the Appendix to this Appeal Brief includes Claims 1-39, of which the status of Claims 1-6, 8-14, 15, 20-27, 30-35, 37 and 38 is indicated as "Previously Presented", the status of Claims 7, 14, 16-19, 28, 29, 36 and 39 is indicated as "Original", and the status of Claims 40-42 is indicated as "Cancelled". Claims 22-29 have been marked by the Examiner as being allowed.

### SUMMARY OF CLAIMED SUBJECT MATTER

The invention as recited in Claim 1 relates to a method of transmitting data rate control (DRC) information to an access network (AN) transmitting packet data for a first transmission period having a plurality of slots in order to request a data rate for packet data to be transmitted by the AN for a second transmission period after the first transmission period in an access terminal (AT) of a mobile telecommunication system.

The method includes receiving a DRC request indicator (DRI) bit in at least one predetermined slot before a last slot of the first transmission period (Specification at page 8, lines 17-

18, and page 9, lines 8-9)<sup>1</sup>.

The method further includes generating the DRC information in response to the DRI bit and transmitting the DRC information to the AN (Specification at page 9, lines 18-23).

The DRI bit indicates if the DRC information is required (Specification at page 8, lines 18-19).

The invention as recited in Claim 4 relates to an access terminal (AT) for transmitting data rate control (DRC) information to an access network (AN) transmitting packet data for a first transmission period having a plurality of slots according to a requested data rate in order to request a data rate for packet data to be transmitted by the AN for a second transmission period after the first transmission period in a mobile telecommunication system.

The AT includes a receiver for receiving a DRC request indicator (DRI) bit in at least one predetermined slot before a last slot of the first transmission period (Specification at page 9, lines 8-9, and page 9, lines 18-19).

The AT further includes a transmitter for selectively transmitting the DRC information according to the DRI bit to the AN (Specification at page 9, lines 19-23).

The DRI bit indicates if the DRC information is required (Specification at page 8, lines 18-19).

The invention as recited in Claim 8 relates to a method of controlling transmission of data rate control (DRC) information from an access terminal (AT) that requests a data rate for packet data in an access network (AN) that transmits the packet data at the requested data rate in a mobile telecommunication system.

The method includes checking a last slot of a first transmission period having a plurality of slots when the AN transmits the packet data to the AT for the first transmission period (Specification at page 8, lines 2-11).

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<sup>1</sup> Although a citation for each feature of the claims is provided herein, Applicants do not concede the fact that support may be found elsewhere in the written description.

The method further includes transmitting a DRC request indicator (DRI) bit to the AT in at least one predetermined slot before the last slot to request DRC information to be used for a second transmission period after the first transmission period to the AT (Specification at page 8, lines 2-11).

The DRI bit indicates if the DRC information is required (Specification at page 8, lines 18-19).

The invention as recited in Claim 11 relates to an access network (AN) for transmitting packet data at a requested data rate to an access terminal (AT) and controlling transmission of DRC information from the AT that requests the data rate for the packet data in a mobile telecommunication system.

The AT includes a controller for determining a last slot of a first transmission period having a plurality of slots when the AN transmits the packet data to the AT for the first transmission period (Specification at page 8, lines 2-11).

The AT further includes a transmitter for transmitting a DRC request indicator (DRI) bit to the AT in at least one predetermined slot before the last slot to request DRC information to be used for a second transmission period after the first transmission period to the AT (Specification at page 8, lines 2-11).

The DRI bit indicates if the DRC information is required (Specification at page 8, lines 18-19).

The invention as recited in Claim 15 relates to a mobile telecommunication system.

The system includes an access network (AN) for transmitting packet data for a first transmission period having a plurality of slots according to a requested data rate and transmitting a DRC request indicator (DRI) bit in at least one predetermined slot before a last slot of the first transmission period (Specification at page 8, lines 2-11).

The system further includes an access terminal (AT) for selectively transmitting data rate control (DRC) information to the AN according to the DRI bit to request a data rate for packet data to be received for a second transmission period after the first transmission period (Specification at page 8, lines 2-11).

The DRI bit indicates if the DRC information is required (Specification at page 8, lines 18-

19).

The invention as recited in Claim 30 relates to a method of transmitting data rate control (DRC) information to an access network (AN) in an access terminal (AT) of a first group in a mobile telecommunication system having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots, and a plurality of ATs divided into the first AT group that includes at least one AT for receiving the packet data for the first transmission period and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period.

The method includes determining a last slot of the first transmission period (Specification at page 14, lines 1-2).

The method further includes generating the DRC information of the AT of the first group in at least one predetermined slot before the last slot and transmitting the DRC information to the AN, said at least one predetermined slot located after the packet data of the first transmission period (Specification at page 14, lines 5-15).

The invention as recited in Claim 33 relates to an access terminal (AT) of a first group for transmitting data rate control (DRC) information to an access network (AN) in a mobile telecommunication system having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots, and a plurality of ATs divided into the first AT group that includes at least one AT for receiving the packet data for the first transmission period and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period.

The AT includes a preamble detector for detecting a preamble (Specification at page 14, lines 1-2).

The AT further includes a packet length detector for detecting the length of the packet data received for the first transmission period from the preamble (Specification at page 14, lines 5-10).

The AT still further includes a controller for determining a last slot of the first transmission period based on the packet length (Specification at page 14, lines 10-12).

The AT yet further includes a transmitter for selectively transmitting the DRC information of the AT of the first group in at least one predetermined slot before the last slot to the AN under the control of the controller, said at least one predetermined slot located after the packet data of the first transmission period (Specification at page 14, lines 12-15).

The invention as recited in Claim 37 relates to an access terminal (AT) in a mobile telecommunication system.

The AT includes a multiplier for sequentially multiplying a received preamble by a plurality of orthogonal codes assigned to a plurality of ATs (Specification at page 14, lines 5-7).

The AT further includes a detector for detecting an AT receiving packet data and the length of the packet data from the multiplication result (Specification at page 14, lines 7-10).

The AT still further includes a controller for determining the termination period of packet data transmission based on the packet length (Specification at page 14, lines 10-12).

The AT yet further includes a transmitter for selectively transmitting data rate control (DRC) information in a predetermined period to an access network (AN) before the termination period, said at least one predetermined period located after the packet data transmission (Specification at page 14, lines 12-15).

#### GROUND FOR REJECTION TO BE REVIEWED ON APPEAL

Whether Claims 1, 4, 8, 11, 15, 16 and 18 under 35 U.S.C. §102(e) are anticipated by U.S. Patent 6,205,129 to Esteves et al. (Esteves).

Whether Claims 7, 14, 17, 19, 30, 33, 36 and 37 under 35 U.S.C. §103(a) are rendered unpatentable over Esteves in view of Proposed High Data Rate (HDR) Standard 3GPP2-C00-20000327 (Proposed HDR Standard).

Whether Claims 2, 5, 9, 12, 20, 31, 34 and 38 under 35 U.S.C. §103(a) are rendered unpatentable over Esteves in view of U.S. Patent 5,689,503 to Wada (Wada).

Whether Claims 3, 6, 10, 13, 21, 32, 35 and 39 under 35 U.S.C. §103(a) are rendered unpatentable over Esteves et al. in view of Wada, and further in view of Proposed HDR Standard.

## ARGUMENT

### 1. Independent Claim 1 is not anticipated by Esteves

Independent Claim 1 was said to be anticipated by Esteves.<sup>2</sup>

Claim 1 relates to a method of transmitting data rate control (DRC) information to an access network (AN) transmitting packet data for a first transmission period having a plurality of slots in order to request a data rate for packet data to be transmitted by the AN for a second transmission period after the first transmission period in an access terminal (AT) of a mobile telecommunication system. The method includes receiving a DRC request indicator (DRI) bit in at least one predetermined slot before a last slot of the first transmission period. The method further includes generating the DRC information in response to the DRI bit and transmitting the DRC information to the AN. The DRI bit indicates if the DRC information is required.

Esteves et al. discloses a method and apparatus for variable and fixed forward link rate control in a mobile radio communications system.<sup>3</sup>

### 1A. The data rate control (DRC) request indicator (DRI) bit that indicates if the DRC information is required of Claim 1 is not anticipated by Esteves

Claim 1 recites “a data rate control (DRC) request indicator (DRI) bit”.

The Examiner alleges that the “balanced state bit” of Esteves et al. is equivalent to the DRI bit of the present application.

The DRI bit of the claims of the present application is a bit used to request data rate control. The DRI bit indicates whether DRC information is needed for scheduling after a predetermined slot period.<sup>4</sup> The DRI bit is used to selectively provide DRC information.

Esteves et al. defines its “balanced state bit” as follows, “if the base station is able to reliably receive DRC messages from the mobile station on the data rate control channel, the base station sends a balanced state bit (i.e., the bit is set to 0 or 1) to the mobile station indicating that the base

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<sup>2</sup> See Office Action dated February 6, 2007, at page 2, paragraph no. 2.

<sup>3</sup> See Esteves, at Title and Abstract.



station is reliably receiving the DRC messages.”<sup>5</sup>

The DRI bit of the present application indicates if the DRC message is required; the balanced state bit of Esteves et al. indicates if the DRC information is being received. Indicating if information is received cannot be equated with indicating if information is needed. The “balance state bit” cannot anticipate the DRI bit.

The DRI bit indicates if the DRC information is required. The DRI bit is information for requesting data transmission. A mobile station (MS) cannot transmit a data rate control (DRC) message when the DRI has been not transmitted, i.e., the DRC information is generated in response to the DRI bit.

The Examiner asserts that the “balanced state bit” in Esteves et al. is also information for requesting data transmission. Esteves et al. does not support this position. According to Esteves et al., when the “balanced state bit” has not been transmitted, the non-transmission does not cause the MS to not be able to transmit the DRC message. The MS uses to the “balanced state bit” when determining a maximum data rate.

As distinguished from Esteves et al., if the MS of the claims of the present application fails to receive a DRI bit, the MS cannot transmit a DRC message.

Thus, the “balanced state bit” of Esteves et al. is different from the DRI of the claims of the present application.

Since Esteves does not teach or disclose at least this recitation of Claim 1 of the present application, of a DRI bit that indicates if the DRC information is required, Claim 1 cannot be anticipated by Esteves.

Based on at least the foregoing, reversal of the rejection of independent Claim 1 under §102(e) is respectfully requested.

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<sup>4</sup> See Specification, at page 8, lines 16-23

<sup>5</sup> See Esteves, at col. 4, lines 37-42

1B. Independent Claim 1 is not anticipated by Esteves

The Examiner has failed to show that each and every element of Claim 1, and in as complete detail as is contained therein, are taught in or suggested by the prior art. The Examiner has failed to make out a prima facie case for an anticipation rejection, and thus Claim 1 is allowable.

2. Dependent Claims 2 and 3 are not unpatentable over Esteves in view of Wada

Dependent Claims 2 and 3 were said to be unpatentable over Esteves in view of Wada. Without conceding the patentability per se of dependent Claims 2 and 3, these claims are likewise believed to be allowable by virtue of their dependence on Claim 1.

3. Independent Claims 4, 8, 11 and 15 are not anticipated by Esteves

Independent Claims 4, 8, 11 and 15 were said to be anticipated by Esteves.<sup>6</sup>

Each of Claims 4, 8, 11 and 15 recite a data rate control (DRC) request indicator (DRI) bit that bit indicates if the DRC information is required. Since this feature is similar to the feature recited in Claim 1, the arguments set forth above also apply to Claims 4, 8, 11 and 15.

Since Esteves does not teach or disclose at least this recitation of Claims 4, 8, 11 and 15 of the present application, of a DRI bit that indicates if the DRC information is required, Claims 4, 8, 11 and 15 cannot be anticipated by Esteves.

Based on at least the foregoing, reversal of the rejection of independent Claims 4, 8, 11 and 15 under §102(e) is respectfully requested.

3A. Independent Claims 4, 8, 11 and 15 are not anticipated by Esteves

The Examiner has failed to show that each and every element of Claims 4, 8, 11 and 15, and in as complete detail as is contained therein, are taught in or suggested by the prior art. The Examiner has failed to make out a prima facie case for an anticipation rejection, and thus Claims 4, 8, 11 and 15 are allowable.

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<sup>6</sup> See Office Action dated February 6, 2007, at page 2, paragraph no. 2.

4. Dependent Claims 7, 14, 17 and 19 are not unpatentable over Esteves in view of Proposed HDR Standard

Dependent Claims 7, 14, and 19 were said to be unpatentable over Esteves in view of Proposed HDR Standard.<sup>7</sup> Without conceding the patentability per se of dependent Claims 7, 14, 17 and 19, these claims are likewise believed to be allowable by virtue of their dependence on Claims 4, 11 and 15.

5. Dependent Claims 5, 9, 12 and 20 are not unpatentable over Esteves in view of Wada

Dependent Claims 5, 9, 12 and 20 were said to be unpatentable over Esteves in view of Wada.<sup>8</sup> Without conceding the patentability per se of dependent Claims 5, 9, 12 and 20, these claims are likewise believed to be allowable by virtue of their dependence on Claims 4, 8, 11 and 15.

6. Dependent Claims 6, 10, 13 and 21 are not unpatentable over Esteves in view of Wada and further in view of Proposed HDR Standard

Dependent Claims 6, 10, 13 and 21 were said to be unpatentable over Esteves in view of Wada and further in view of Proposed HDR Standard.<sup>9</sup> Without conceding the patentability per se of dependent Claims 6, 10, 13 and 21, these claims are likewise believed to be allowable by virtue of their dependence on Claims 4, 8, 11 and 15.

7. Independent Claim 30 is not rendered unpatentable over Esteves in view of Proposed HDR Standard

Independent Claim 30 was said to be rendered unpatentable over Esteves in view of Proposed HDR Standard.<sup>10</sup>

The invention as recited in Claim 30 relates to a method of transmitting data rate control (DRC) information to an access network (AN) in an access terminal (AT) of a first group in a mobile telecommunication system having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots, and a plurality of ATs divided into the first AT

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<sup>7</sup> See Office Action dated February 6, 2007, at page 6, paragraph no. 4.

<sup>8</sup> See Office Action dated February 6, 2007, at page 13, paragraph no. 5.

<sup>9</sup> See Office Action dated February 6, 2007, at page 13, paragraph no. 6.

<sup>10</sup> See Office Action dated February 6, 2007, at page 6, paragraph no. 4.

group that includes at least one AT for receiving the packet data for the first transmission period and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period. The method includes determining a last slot of the first transmission period. The method further includes generating the DRC information of the AT of the first group in at least one predetermined slot before the last slot and transmitting the DRC information to the AN, said at least one predetermined slot located after the packet data of the first transmission period.

Esteves et al. discloses a method and apparatus for variable and fixed forward link rate control in a mobile radio communications system.<sup>11</sup>

Proposed HDR Standard discloses a proposed enhancement to the Code Division Multiple Access (CDMA) 2000 HDR communication system standard.<sup>12</sup>

7A. The determination of a last slot, and that the DRC information is generated in at least one predetermined slot, the at least one predetermined slot being before the last slot and after the packet data and in the first transmission period is not rendered obvious over Esteves in view of Proposed HDR Standard

Claim 30 recites that a last slot is determined, and that the DRC information is generated in at least one predetermined slot, the at least one predetermined slot being before the last slot and after the packet data and in the first transmission period.

Estevez et al. monitors each time slot; Esteves does not specifically determine (or check for) the last time slot. Esteves et al. does not transmit the DRC information between the packet data and the last slot of the first transmission period.

The Proposed HDR Standard in FIG. 9-10 clearly illustrates that start of the DRC is during the packet data, i.e. "pilot/DRC\_n" begins transmission during "AN Sending DATA\_n" and during "AT receiving DATA\_n and PILOT\_n".

Therefore, neither Esteves nor the Proposed HDR Standard, or any combination thereof, teaches or discloses that the DRC information is generated in at least one predetermined slot before the last slot and after the packet data and in the first transmission period.

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<sup>11</sup> See Esteves, at Title and Abstract.

<sup>12</sup> See Proposed HDR Standard, at Abstract.

Since neither Esteves nor Proposed HDR Standard, either alone or in combination, teaches or discloses at least this recitation of Claim 30 of the present application, of determining a last slot, and that the DRC information is generated in at least one predetermined slot, the at least one predetermined slot being before the last slot and after the packet data and in the first transmission period a DRI bit that indicates if the DRC information is required, Claim 30 cannot be rendered unpatentable over Esteves in view of Proposed HDR Standard.

Based on at least the foregoing, reversal of the rejection of independent Claim 30 under §103(a) is respectfully requested.

7B. Independent Claim 30 is not rendered unpatentable over Esteves in view of Proposed HDR Standard

The Examiner has failed to show that each and every element of Claim 30, and in as complete detail as is contained therein, are taught in or suggested by the prior art. The Examiner has failed to make out a prima facie case for an obviousness rejection, and thus Claim 30 is allowable.

8. Dependent Claim 31 is not unpatentable over Esteves in view of Wada

Dependent Claim 31 was said to be unpatentable over Esteves in view of Wada.<sup>13</sup> Without conceding the patentability per se of dependent Claim 31, this claim is likewise believed to be allowable by virtue of its dependence on Claim 30.

9. Dependent Claim 32 is not unpatentable over Esteves in view of Proposed HDR Standard

Dependent Claim 32 was said to be unpatentable over Esteves in view of Proposed HDR Standard.<sup>14</sup> Without conceding the patentability per se of dependent Claim 32, this claim is likewise believed to be allowable by virtue of its dependence on Claim 30.

10. Independent Claims 33 and 37 are not unpatentable over Esteves in view of Proposed HDR Standard

Independent Claims 33 and 37 were said to be unpatentable over Esteves in view of

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<sup>13</sup> See Office Action dated February 6, 2007, at page 13, paragraph no. 5.

<sup>14</sup> See Office Action dated February 6, 2007, at page 13, paragraph no. 6.

Proposed HDR Standard.<sup>15</sup>

Each of Claims 33 and 37 recite similar features to those recited in Claim 30, and therefore the arguments set forth above with respect to Claim 30 also apply to Claims 33 and 37.

Since Esteves does not teach or disclose the recitations of Claims 33 and 37 of the present application, Claims 33 and 37 cannot be rendered unpatentable over Esteves in view of Proposed HDR Standard.

Based on at least the foregoing, reversal of the rejection of independent Claims 33 and 37 under §103(a) is respectfully requested.

10A. Independent Claims 33 and 37 are not unpatentable over Esteves in view of Proposed HDR Standard

The Examiner has failed to show that each and every element of Claims 33 and 37, and in as complete detail as is contained therein, are taught in or suggested by the prior art. The Examiner has failed to make out a prima facie case for an obviousness rejection, and thus Claims 33 and 37 are allowable.

11. Dependent Claim 36 is not unpatentable over Esteves in view of Proposed HDR Standard

Dependent Claim 36 was said to be unpatentable over Esteves in view of Proposed HDR Standard.<sup>16</sup> Without conceding the patentability per se of dependent Claim 36, this claim is likewise believed to be allowable by virtue of its dependence on Claim 33.

12. Dependent Claims 34 and 38 are not unpatentable over Esteves in view of Wada

Dependent Claims 34 and 38 were said to be unpatentable over Esteves in view of Wada.<sup>17</sup> Without conceding the patentability per se of dependent Claims 34 and 38, these claims are likewise believed to be allowable by virtue of their dependence on Claims 33 and 37.

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<sup>15</sup> See Office Action dated February 6, 2007, at page 2, paragraph no. 2.

<sup>16</sup> See Office Action dated February 6, 2007, at page 6, paragraph no. 4.

<sup>17</sup> See Office Action dated February 6, 2007, at page 13, paragraph no. 5.

13. Dependent Claims 35 and 39 are not unpatentable over Esteves in view of Wada and further in view of Proposed HDR Standard

Dependent Claims 35 and 39 were said to be unpatentable over Esteves in view of Wada and further in view of Proposed HDR Standard.<sup>18</sup> Without conceding the patentability per se of dependent Claims 35 and 39, these claims are likewise believed to be allowable by virtue of their dependence on Claims 33 and 37.

CONCLUSION

It is well settled that “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); and, that “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Examiner has failed to show that each and every element of Claims 1, 4, 8, 11 and 15, and in as complete detail as is contained therein, are taught in or suggested by the prior art. The Examiner has failed to make out a prima facie case for an anticipation rejection.

Based on at least the foregoing, as the Examiner has failed to make out a prima facie case for an anticipation rejection, independent Claims 1, 4, 8, 11 and 15 are not anticipated by Esteves, and therefore, the rejection of Claims 1-21 must be reversed.

It is well settled that in order for a rejection under 35 U.S.C. §103(a) to be appropriate, the claimed invention must be shown to be obvious in view of the prior art as a whole. A claim may be found to be obvious if it is first shown that all of the recitations of a claim are taught in the prior art or are suggested by the prior art. *In re Royka*, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (C.C.P.A. 1974), cited in M.P.E.P. §2143.03.

The Examiner has failed to show that all of the recitations of Claims 30, 33 and 37 are taught

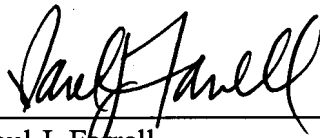
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<sup>18</sup> See Office Action dated February 6, 2007, at page 13, paragraph no. 6.

or suggested by the prior art or and combination thereof. Accordingly, the Examiner has failed to make out a prima facie case for an obviousness rejection.

Based on at least the foregoing, as the Examiner has failed to make out a prima facie case for an obviousness rejection, independent Claims 30, 33 and 37 are not rendered obvious by Esteves in view of Proposed HDR Standard, and therefore, the rejection of Claims 30-39 must be reversed.

Dated: August 6, 2007

By:   
Paul J. Farrell  
Reg. No.: 33,494  
Attorney for Applicant

THE FARRELL LAW FIRM, P.C.  
333 Earle Ovington Blvd., Suite 701  
Uniondale, New York 11553  
(516) 228-3565 (tel)  
(516) 228-8475 (fax)



## CLAIMS APPENDIX

1. (Previously Presented) A method of transmitting data rate control (DRC) information to an access network (AN) transmitting packet data for a first transmission period having a plurality of slots in order to request a data rate for packet data to be transmitted by the AN for a second transmission period after the first transmission period in an access terminal (AT) of a mobile telecommunication system, comprising the steps of:

receiving a DRC request indicator (DRI) bit in at least one predetermined slot before a last slot of the first transmission period; and

generating the DRC information in response to the DRI bit and transmitting the DRC information to the AN,

wherein the DRI bit indicates if the DRC information is required.

2. (Previously Presented) The method of claim 1, wherein the at least one predetermined slot is the second slot from the last slot.

3. (Previously Presented) The method of claim 2, wherein the at least one predetermined slot are the first two slots from the last slot and the last slot.

4. (Previously Presented) An access terminal (AT) for transmitting data rate control (DRC) information to an access network (AN) transmitting packet data for a first transmission period having a plurality of slots according to a requested data rate in order to request a data rate for packet data to be transmitted by the AN for a second transmission period after the first transmission period in a mobile telecommunication system, comprising:

a receiver for receiving a DRC request indicator (DRI) bit in at least one predetermined slot before a last slot of the first transmission period; and

a transmitter for selectively transmitting the DRC information according to the DRI bit to the AN,

wherein the DRI bit indicates if the DRC information is required.

5. (Previously Presented) The AT of claim 4, wherein the at least one predetermined slot is the second slot from the last slot.

6. (Previously Presented) The AT of claim 4, wherein the at least one predetermined slot indicates the first two slots from the last slot and the last slot.

7. (Original) The AT of claim 4, wherein the transmitter comprises a selector for receiving the DRC information and selectively outputting the DRC information according to the DRI bit, and a spreader for spreading the output of the selector with a predetermined orthogonal code.

8. (Previously Presented) A method of controlling transmission of data rate control (DRC) information from an access terminal (AT) that requests a data rate for packet data in an access network (AN) that transmits the packet data at the requested data rate in a mobile telecommunication system, comprising the steps of:

checking a last slot of a first transmission period having a plurality of slots when the AN transmits the packet data to the AT for the first transmission period; and

transmitting a DRC request indicator (DRI) bit to the AT in at least one predetermined slot before the last slot to request DRC information to be used for a second transmission period after the first transmission period to the AT,

wherein the DRI bit indicates if the DRC information is required.

9. (Previously Presented) The method of claim 8, wherein the at least one predetermined slot is the second slot from the last slot.

10. (Previously Presented) The method of claim 8, wherein the at least one predetermined slot indicates the first two slots from the last slot and the last slot.

11. (Previously Presented) An access network (AN) for transmitting packet data at a requested data rate to an access terminal (AT) and controlling transmission of DRC information from the AT that requests the data rate for the packet data in a mobile telecommunication system,

comprising:

a controller for determining a last slot of a first transmission period having a plurality of slots when the AN transmits the packet data to the AT for the first transmission period; and

a transmitter for transmitting a DRC request indicator (DRI) bit to the AT in at least one predetermined slot before the last slot to request DRC information to be used for a second transmission period after the first transmission period to the AT,

wherein the DRI bit indicates if the DRC information is required.

12. (Previously Presented) The AN of claim 11, wherein the at least one predetermined slot is the second slot from the last slot.

13. (Previously Presented) The AN of claim 11, wherein the at least one predetermined slot indicates the first two slots from the last slot and the last slot.

14. (Original) The AN of claim 11, further comprising a spreader for spreading the DRI bit with a predetermined orthogonal code.

15. (Previously Presented) A mobile telecommunication system comprising:

an access network (AN) for transmitting packet data for a first transmission period having a plurality of slots according to a requested data rate and transmitting a DRC request indicator (DRI) bit in at least one predetermined slot before a last slot of the first transmission period; and

an access terminal (AT) for selectively transmitting data rate control (DRC) information to the AN according to the DRI bit to request a data rate for packet data to be received for a second transmission period after the first transmission period,

wherein the DRI bit indicates if the DRC information is required.

16. (Original) The mobile telecommunication system of claim 15, wherein the AT comprises a receiver for receiving the DRI bit from the AN and a transmitter for selectively transmitting the DRC information to the AN according to the DRI bit.

17. (Original) The mobile telecommunication system of claim 16, wherein the transmitter comprises a selector for receiving the DRC information and selectively outputting the DRC information according to the DRI bit, and a spreader for spreading the output of the selector with a predetermined orthogonal code.

18. (Original) The mobile telecommunication system of claim 15, wherein the AN comprises a controller for checking the last slot of the first transmission period when the AN transmits the packet data to the AT for the first transmission period, and a transmitter for transmitting the DRI bit to the AT.

19. (Original) The mobile telecommunication system of claim 18, wherein the transmitter includes a spreader for spreading the DRI bit with a predetermined orthogonal code.

20. (Previously Presented) The mobile telecommunication system of claim 15, wherein the at least one predetermined slot is the second slot from the last slot.

21. (Previously Presented) The mobile telecommunication system of claim 15, wherein the at least one predetermined slot indicates the first two slots from the last slot and the last slot.

22. (Previously Presented) A method of transmitting data rate control (DRC) information to an access network (AN) in an access terminal (AT) of a second group in a mobile telecommunication system having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots, and a plurality of ATs divided into a first AT group that includes at least one AT for receiving the packet data for the first transmission period and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period, the method comprising the steps of:

detecting ATs of the first group by multiplying a received preamble by a plurality of predetermined orthogonal codes assigned to the plurality of ATs;

detecting the length of the packet data transmitted to the first group of ATs for the first transmission period from the preamble and determining a last slot of the first transmission period;

and

generating the DRC information of the AT of the second group in at least one predetermined slot before the last slot and transmitting the DRC information to the AN, said at least one predetermined slot located after the packet data of the first transmission period of the first group.

23. (Previously Presented) The method of claim 22, wherein the at least one predetermined slot is the second slot from the last slot.

24. (Previously Presented) The method of claim 22, wherein the at least one predetermined slot indicates the first two slots from the last slot and the last slot.

25. (Previously Presented) An access terminal (AT) of a second group for transmitting data rate control (DRC) information to an access network (AN) in a mobile telecommunication system having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots, and a plurality of ATs divided into a first AT group that includes at least one AT for receiving the packet data for the first transmission period and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period, comprising:

a multiplier for detecting ATs of the first group by multiplying a received preamble by a plurality of predetermined orthogonal codes assigned to the plurality of ATs;

a packet length detector for detecting the length of the packet data transmitted to the first group of ATs for the first transmission period from the preamble;

a controller for determining a last slot of the first transmission period; and

a transmitter for selectively transmitting the DRC information of the AT of the second group in at least one predetermined slot before the last slot to the AN under the control of the controller, said at least one predetermined slot located after the packet data of the first transmission period.

26. (Previously Presented) The AT of claim 25, wherein the at least one predetermined slot is the second slot from the last slot.

27. (Previously Presented) The AT of claim 25, wherein the at least one predetermined slot indicates the first two slots from the last slot and the last slot.

28. (Original) The AT of claim 25, further comprising an accumulator for accumulating the multiplication result received from the multiplier and an energy detector for detecting an energy value corresponding to the accumulation result and feeding the energy value to the packet length detector.

29. (Original) The AT of claim 25, wherein the transmitter comprises a selector for receiving the DRC information and selectively outputting the DRC information under the control of the controller, and a spreader for spreading the output of the selector with a predetermined orthogonal code.

30. (Previously Presented) A method of transmitting data rate control (DRC) information to an access network (AN) in an access terminal (AT) of a first group in a mobile telecommunication system having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots, and a plurality of ATs divided into the first AT group that includes at least one AT for receiving the packet data for the first transmission period and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period, the method comprising the steps of:

determining a last slot of the first transmission period; and

generating the DRC information of the AT of the first group in at least one predetermined slot before the last slot and transmitting the DRC information to the AN, said at least one predetermined slot located after the packet data of the first transmission period.

31. (Previously Presented) The method of claim 30, wherein the at least one predetermined slot is the second slot from the last slot.

32. (Previously Presented) The method of claim 30, wherein the at least one predetermined slot indicates the first two slots from the last slot and the last slot.

33. (Previously Presented) An access terminal (AT) of a first group for transmitting data rate control (DRC) information to an access network (AN) in a mobile telecommunication system having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots, and a plurality of ATs divided into the first AT group that includes at least one AT for receiving the packet data for the first transmission period and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period, comprising:

a preamble detector for detecting a preamble;

a packet length detector for detecting the length of the packet data received for the first transmission period from the preamble;

a controller for determining a last slot of the first transmission period based on the packet length; and

a transmitter for selectively transmitting the DRC information of the AT of the first group in at least one predetermined slot before the last slot to the AN under the control of the controller, said at least one predetermined slot located after the packet data of the first transmission period.

34. (Previously Presented) The AT of claim 33, wherein the at least one predetermined slot is the second slot from the last slot.

35. (Previously Presented) The AT of claim 33, wherein the at least one predetermined slot indicates the first two slots from the last slot and the last slot.

36. (Original) The AT of claim 33, wherein the transmitter comprises a selector for receiving the DRC information and selectively outputting the DRC information under the control of the controller, and a spreader for spreading the output of the selector with a predetermined orthogonal code.

37. (Previously Presented) An access terminal (AT) in a mobile telecommunication system, comprising:

a multiplier for sequentially multiplying a received preamble by a plurality of orthogonal codes assigned to a plurality of ATs;

a detector for detecting an AT receiving packet data and the length of the packet data from the multiplication result;

a controller for determining the termination period of packet data transmission based on the packet length; and

a transmitter for selectively transmitting data rate control (DRC) information in a predetermined period to an access network (AN) before the termination period, said at least one predetermined period located after the packet data transmission.

38. (Previously Presented) The AT of claim 37, wherein if the transmission period includes a plurality of slots, the predetermined period is the second slot from a last slot.

39. (Original) The AT of claim 37, wherein if the transmission period includes a plurality of slots, the predetermined period indicates the first two slots from a last slot and the last slot.

40-42. (Cancelled)



## **EVIDENCE APPENDIX**

There is no evidence submitted pursuant to 37 C.F.R. 1.130, 1.131, 1.132 or entered by the Examiner and relied upon by Appellant.

## **RELATED PROCEEDINGS APPENDIX**

There are no known decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 C.F.R. 41.37.